



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :

Takehiko KEZUKA, et al.

Serial No.: 09/856,358

Art Unit: 1765

Filed: May 22, 2001

Examiner: UMEZ ERONINI, LYNETTE T.

For: DRY ETCHING SOLUTION, ETCHED ARTICLE AND METHOD FOR ETCHED ARTICLE

DECLARATION

Honorable Commissioner of Patents and Trademarks

Washington, D. C. 20231

SIR:

I, Mitsushi ITANO, declare that:

- 1) I am one of the inventors of the above-identified application, and am familiar with the subject matter of said application as well as the disclosures in the cited references.
- 2) In order to demonstrate the advantage of the present invention, the following experiments were carried out under my direction and supervision.

Experiment

Etching rate and selectivity were determined according to example 1 of the specification, except that sulfuric acid-containing etching solutions as shown in Table I were used.

The results were shown in Table A below.

Table A

Inorganic Acid	HF (Wt%)	H ₂ O (wt%)	Etching rate (Å/min) at 25°C				Selectivity at 25°C			
			BSG	BPSG	TEOS	THOX	BSG/THOX	BPSG/THOX	TEOS/THOX	
None	1	99	410	770	192	63	6	12	3	
H ₂ SO ₄ (60%)	1	39	14500	17000	1500	540	27	31	3	
H ₂ SO ₄ (70%)	1	29	20000	20500	1700	590	34	35	3	
H ₂ SO ₄ (80%)	1	19	12300	10500	850	250	49	42	3	
H ₂ SO ₄ (90%)	1	9	1500	1300	210	8	191	165	27	

I, the undersigned, declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: _____

Mitsushi ITANO